

Bandera County

River Authority & Groundwater District

Protecting & Preserving our Natural Resources

General Manager's Report

Dave Mauk, General Manager
April 30, 2020

Our Mission

“The principle mission of the Bandera County River Authority and Groundwater District is to protect and preserve the county’s water and natural resources for the State of Texas. The District is also tasked with maintaining local accountability of the county’s water resources to help safeguard the property rights of the citizens of Bandera County.”



Groundwater Reports

Quarterly Well Report

Registered Wells 2nd Quarter 2020

- January - 9 wells
- February - 11 wells
- March - 8 wells

Total 2nd Quarter 2020 = 28 wells

Registered Wells 2nd Quarter 2019

- January - 4 wells
- February - 5 wells
- March - 10 wells

Total 2nd Quarter 2019 = 19 wells

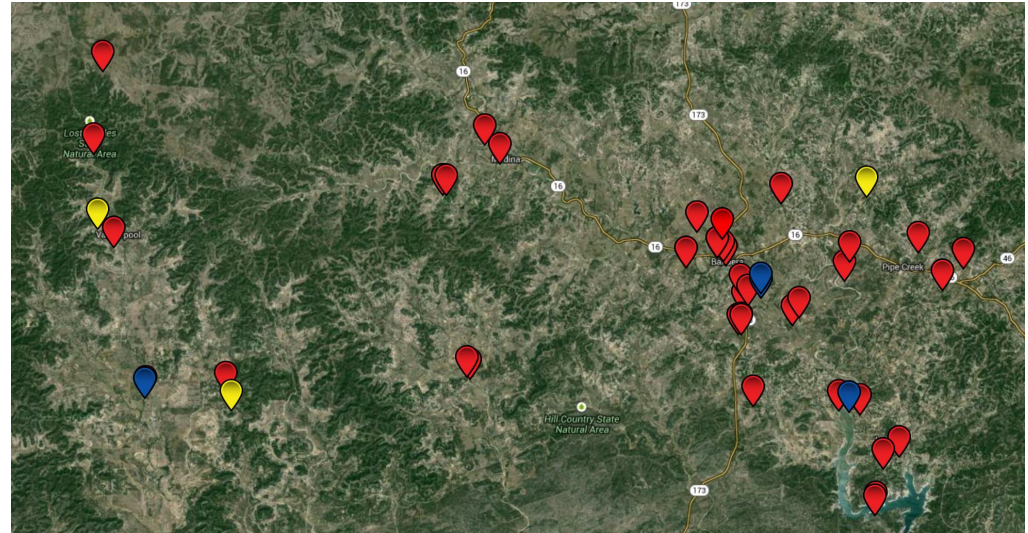
Permitted Wells - 1

Variance Requests - 6 approved,
0 pending



Monitor Well Program

- 42 monitor wells
- Static levels collected monthly
- Water Quality samples collected quarterly



Groundwater Evaluation

Middle Trinity Aquifer, (Bandera County) average

July 2010 to March 2020 *average decline*----- -20.1 ft.

March 2019 to March 2020 *average decline* ----- -16.2 ft.

Lower Trinity Aquifer

July 2010 to March 2020 *average decline* ----- -13.2 ft.

March 2019 to March 2020 *average decline*----- -0.8 ft.

Edwards Group of the Edwards - Trinity (Plateau) Aquifers

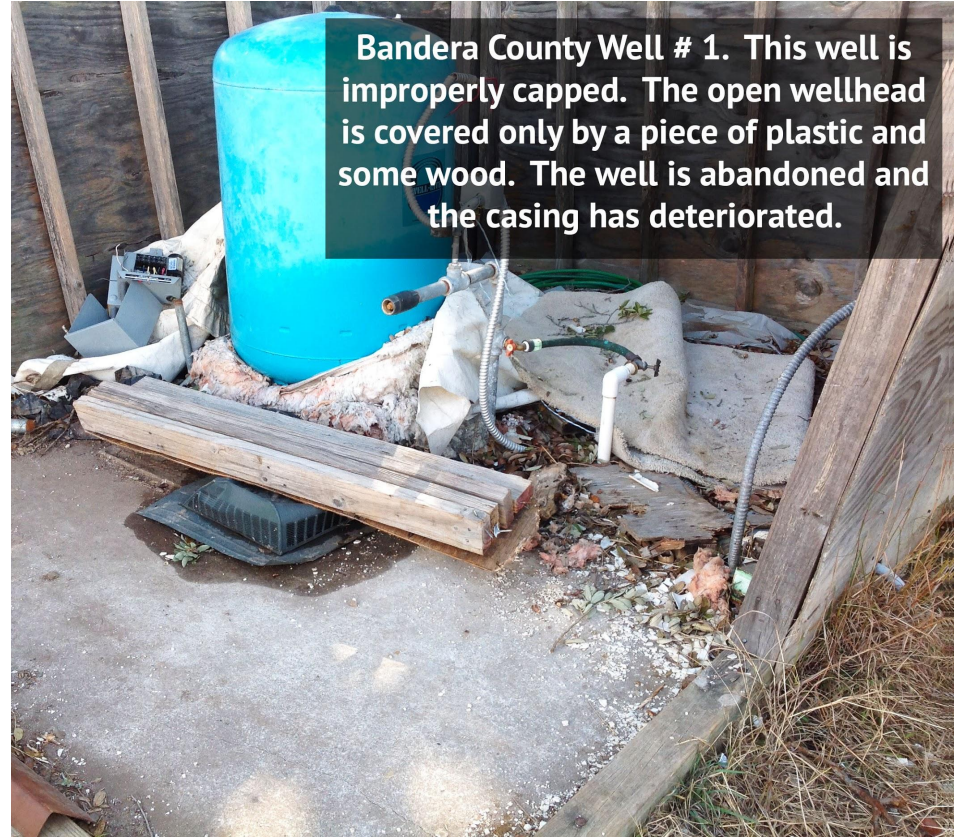
(Edwards Monitor Well)

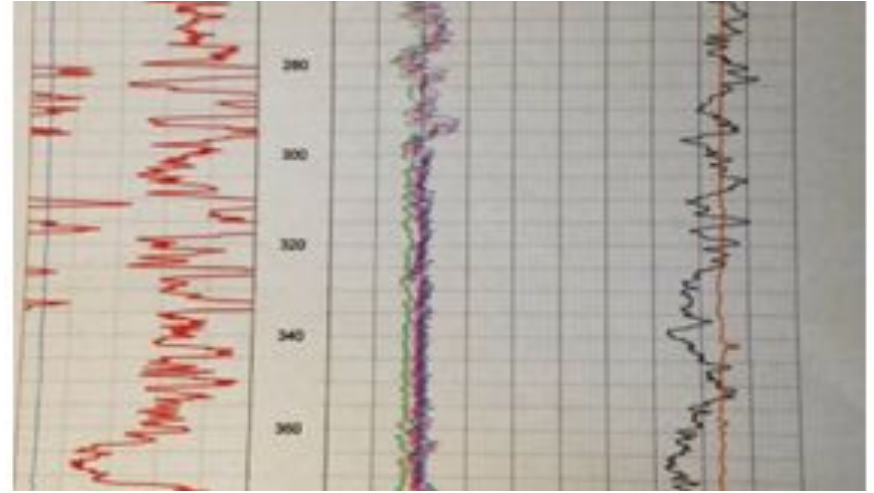
June 2011 to March 2020 *increase*----- +5.9 ft.

March 2019 to March 2020 *decreased*----- -1.6 ft.

Abandoned Well-Plugging Program

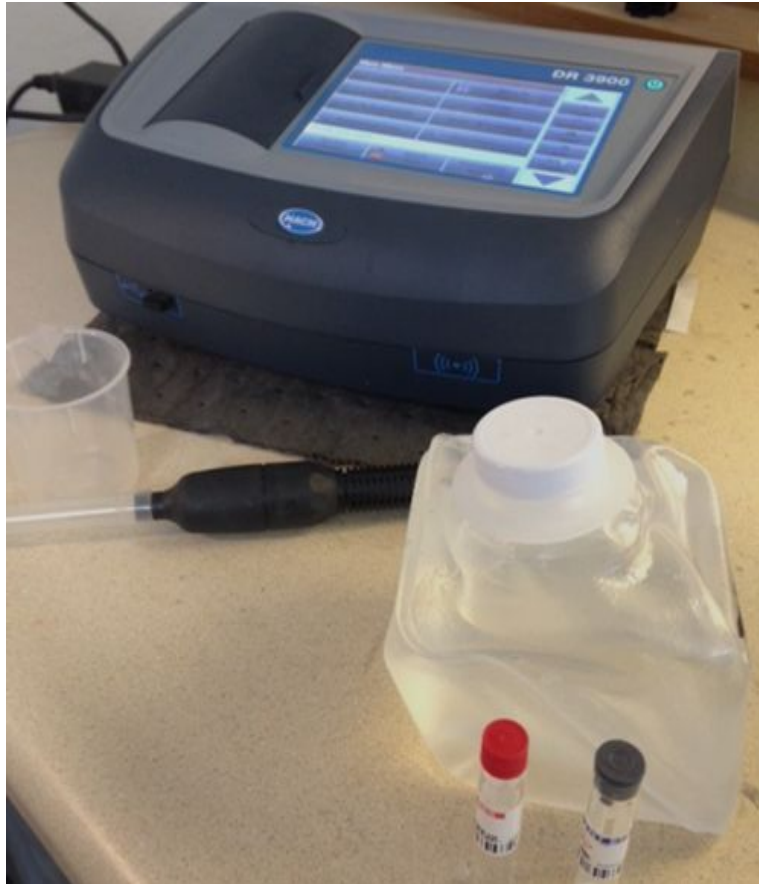
0 Wells Plugged this Quarter





Geophysical Logging Program

2 Geophysical Logs this Quarter



Groundwater Analyses

2nd Quarter 2020

- Mineral Only - 2
- Bacteria Only - 28
- Both - 31

VS

2nd Quarter 2019

- Mineral Only - 5
- Bacteria Only - 40
- Both - 36



Investigations

5 Nuisance Complaints

0 Notice of Violation



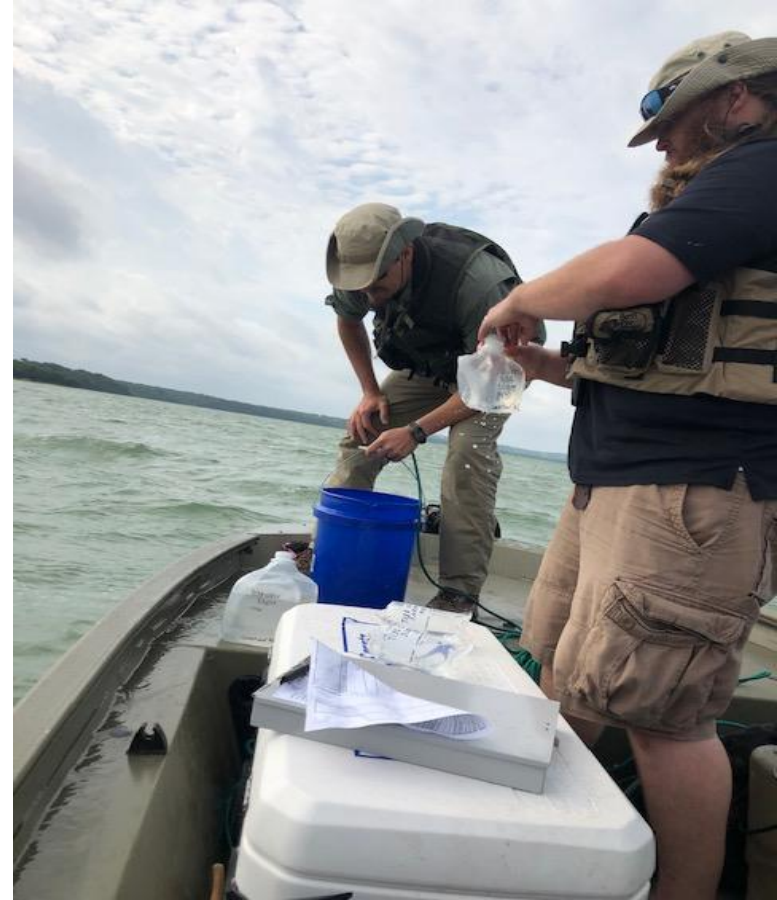
Shown on this slide are images taken from illegal dumping investigations conducted by our Code Enforcement Officer and associated team.



Illegal Dumping Litter Abatement Program

Illegal dumping includes the following possible violations:

- Sewage or septic tank failures
- Illegal trash dumps
- Violations of TCEQ or EPA rules on dumping waste including, but not limited to, harmful chemicals, VOCs, heavy metals, etc.
- Any waste of water as defined in the Texas Water Code and BCRA GD rules



Surface Water Reports



Clean Rivers Program

→ Quarterly water quality assessments and samples taken from sites on the Medina River Basin and the Nueces River Basin

- ◆ 8 Medina River sites
- ◆ 5 Medina Lake sites
- ◆ 3 Sabinal River / Seco Creek sites

→ BCRAGD partners with San Antonio River Authority and Nueces River Authority for Quality Assurance/Quality Control, Data Entry, and Laboratory Services

→ Aquatic Life Monitoring with SARA during the summers

CRP Sampling Dates

Sabinal River

- January 8, 2020

Medina River

- January 2 & 29, 2020
- February 13, 2020

Medina Lake

- February 2, 2020
- February 19 & 26, 2020



In-House Surface Water Quality Sampling

- Initiated to monitor surface water quality for the purpose of protecting the resource and public health in frequented recreational areas
- 22 sites in the Medina and Sabinal Rivers, and Seco Creek, are sampled quarterly during the year
- Recreational hotspots are sampled bi-weekly during the summer
- Results are posted on the BCRAGD website and submitted to the local newspaper

Quarterly In-House Results from March 5 & 10, 2020

Results listed below were analyzed at the BCRAGD lab:

Medina Lake - Park @ PR 37	1 MPN	Bandera City Park @ 1st St	770 MPN* 308 MPN**	W. Prong @ Coalkiln Rd	275 MPN
English Crossing	228 MPN	Tarpley Crossing	214 MPN	W. Prong @ Carpenter Ck	155 MPN
Bridlegate Park	261 MPN	Ranger Crossing	345 MPN	Williams Ck in Tarpley	238 MPN
Bandera River Ranch Park	Dry	Moffett Park in Medina	133 MPN	Seco Ck @ RR470	17 MPN
Bandera Creek @ SH 16 S	228 MPN	1st Crossing @ RR337	70 MPN	Sabinal R @ Cornelius Rd	275 MPN
Lower Mason Creek	84 MPN	N. Prong, Brewington	127 MPN	Sabinal R @ SH187	270 MPN
Upstream of WWTP, Bandera	579 MPN* 125 MPN**	N. Prong, Rocky Ck	727 MPN* 56 MPN**	Sabinal R @ Lost Maples	308 MPN
Bandera City Park @ SH173	1987 MPN* 291 MPN**	N. Prong, Wallace Ck	275 MPN	West Verde Ck @ FM1077	308 MPN
Utopia City Park	488 MPN* 461 MPN**				

*indicates that the sample was over the TCEQ threshold

**indicates a resample done on March 10th

The above results can also be found on the BCRAGD website, www.bcragd.org, and the BCRAGD Facebook page. BCRAGD is not a certified lab. Results are for informational purposes only.

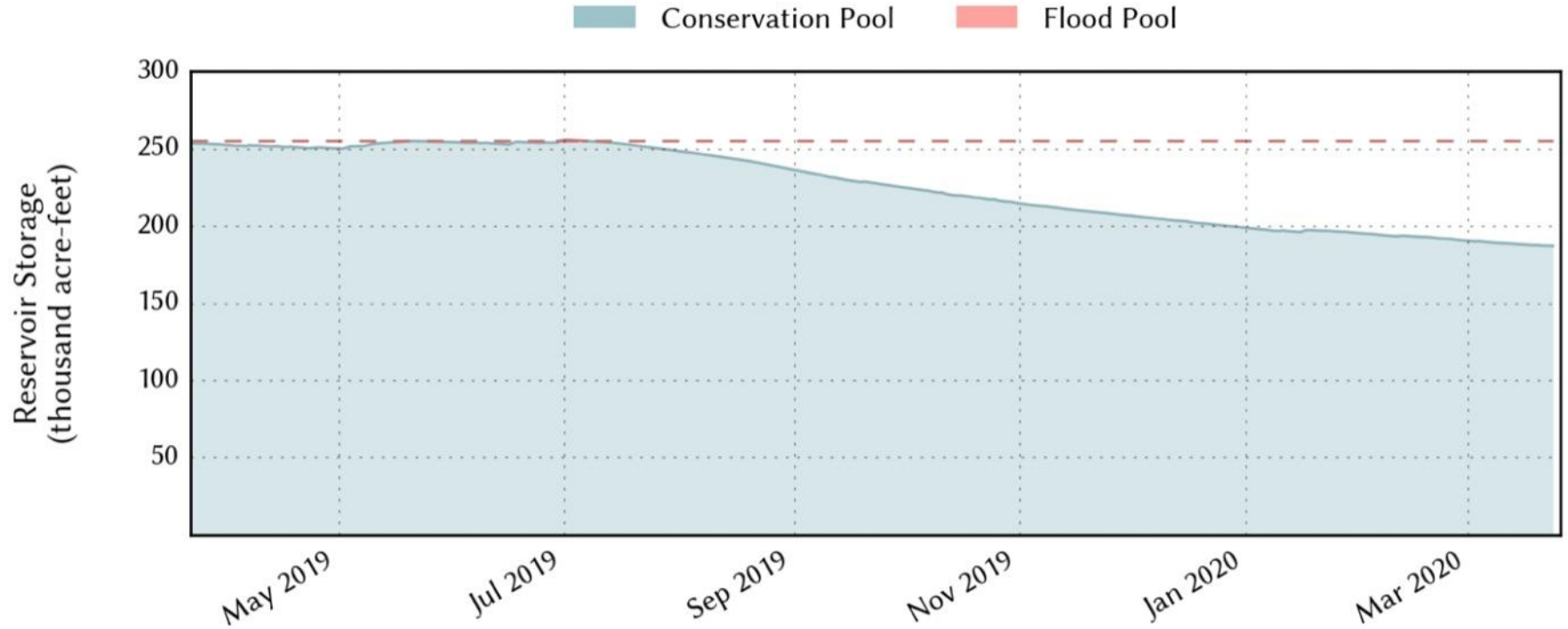
**MPN stands for “most probable number”

Medina Lake Update

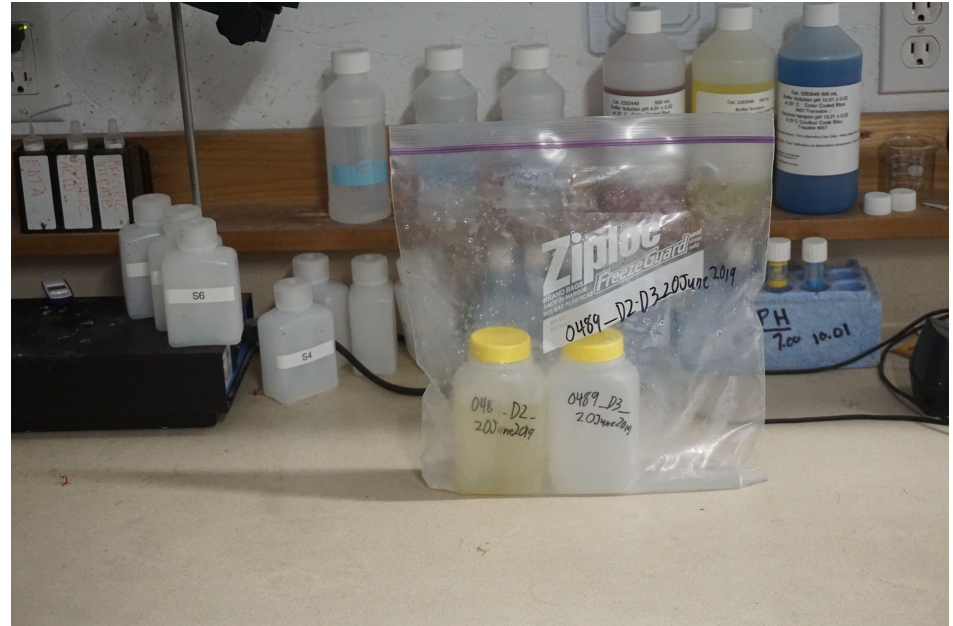
Measurements provided by the Texas Water Development Board's Water Data for Texas website (<https://waterdatafortexas.org/reservoirs/individual/medina>) accessed for report on March 24, 2020:

- On March 24, 2020, Medina Lake measured 73.4% full.
- On February 24, 2020, Medina Lake measured 75.2% full.
- On December 24, 2019 Medina Lake measured 78.7% full.

Medina Lake Update



Invasive Species Management Update



Arundo Donax Surveys



BCRAGD will be continuing our partnership with Texas Parks and Wildlife to control the spread of Arundo Donax, an invasive species in the state of Texas. The program has been put on hold due to COVID-19. The Arundo Donax pictured to the left and below are untreated, while the Arundo Donax pictured to the right is treated.





Education & Outreach Programs

2nd Quarter Education

- February 27, 2020 and March 6 & 7, 2020, the Education and Outreach team attended Project WILD workshops.
- On February 25, 2020, BCRA GD co-sponsored the Hill-Side Stewardship with Hill Country Alliance. This included an interactive and engaging program for Bandera County Landowners.
- On February 11, 2020, BCRA GD presented to the 5th graders of Hill Country Elementary with the Nueces River Authority.



2nd Quarter Outreach



February 26, 2020

BCRAGD, in conjunction with USGS, held an update meeting on the Upper Sabinal River Flood Early Warning System in Utopia, Texas.

That same day, BCRAGD hosted the USGS's Public Training on the completed Medina River Flood Early Warning System.

BCRAGD in the Media

BCRAGD is continuing to improve our community outreach through social media. We prioritize posting the latest water quality results, flood awareness and gauge resources, water successes, and news stories. We also keep the public informed on educational visits, informational / educational meetings, and public events.



April 2020

**BANDERA COUNTY RIVER AUTHORITY AND
GROUNDWATER DISTRICT**

Vol 1 Issue03

Bi-Monthly Newsletter



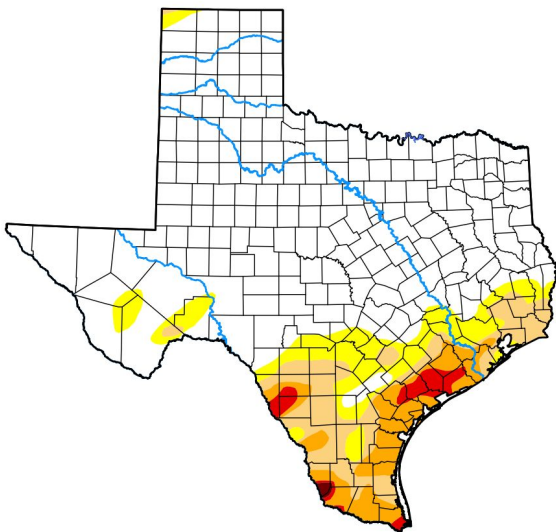
Inside the Issue

Check out our website
for our 2019 Annual
Report!
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Drought Monitoring

U.S. Drought Monitor Texas



April 14, 2020
(Released Thursday, Apr. 16, 2020)
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	75.16	24.84	15.93	7.75	1.80	0.14
Last Week 04-07-2020	74.84	25.16	19.22	10.49	2.50	0.14
3 Months Ago 01-14-2020	44.70	55.30	36.79	10.76	1.29	0.00
Start of Calendar Year 12-31-2019	44.69	55.31	36.12	9.19	0.74	0.00
Start of Water Year 10-01-2019	31.74	68.26	46.05	22.33	6.32	0.00
One Year Ago 04-16-2019	74.85	25.15	5.22	0.00	0.00	0.00

Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.asp>

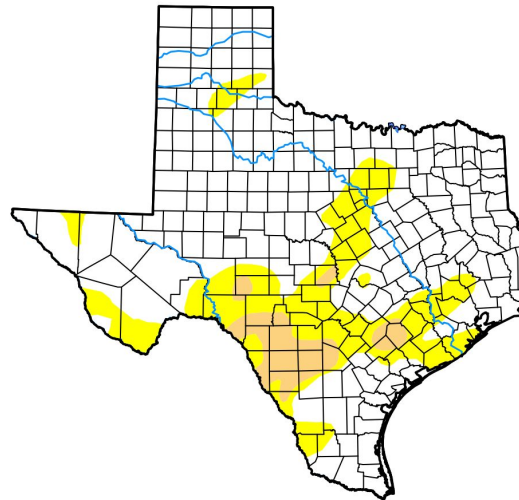
Author:

Brian Fuchs
National Drought Mitigation Center



droughtmonitor.unl.edu

U.S. Drought Monitor Texas



April 16, 2019
(Released Thursday, Apr. 18, 2019)
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	74.85	25.15	5.22	0.00	0.00	0.00
Last Week 04-09-2019	61.20	38.80	7.83	0.00	0.00	0.00
3 Months Ago 01-15-2019	91.82	8.18	1.60	0.00	0.00	0.00
Start of Calendar Year 01-01-2019	92.99	7.01	1.32	0.00	0.00	0.00
Start of Water Year 09-25-2018	57.46	42.54	20.19	7.03	0.96	0.00
One Year Ago 04-17-2018	35.09	64.91	49.47	23.58	13.70	4.37

Intensity:

D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought
D2 Severe Drought	

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

David Miskus
NOAA/NWS/NCEP/CPC



<https://droughtmonitor.unl.edu/>

Rainfall Monitoring

- Gages and Weather Stations
 - ◆ USGS gages track precipitation
 - ◆ BCRAGD was granted access to a weather station provided by the Edwards Aquifer Authority through a HOBOLink.

- BCRAGD has a network of volunteers called Rainspotters that submit rainfall in inches that they record each month.



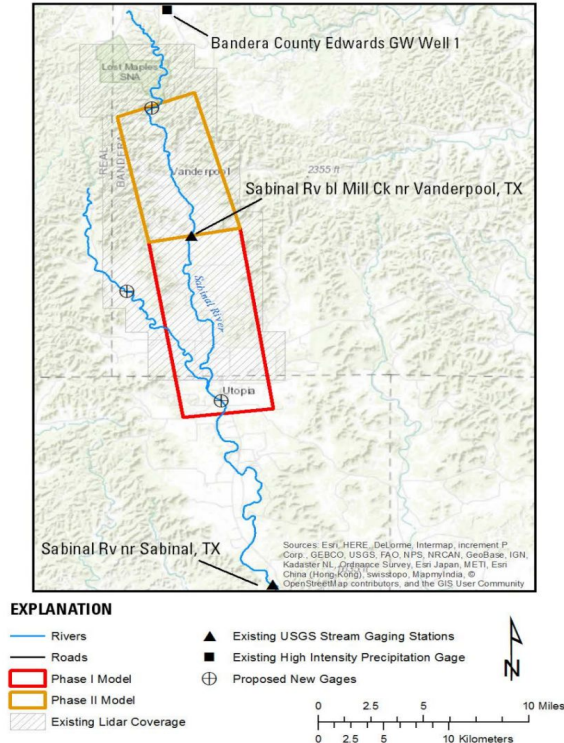
Rainfall Update

Rainfall data for the period January-February-March 2020 from EAA gauge at BCRAGD office reports:

- January = 5.31 inches
- February = 1.66 inches
- March = 1.34 inches
- Rainfall Max = 0.59 inches

Rainspotter and Electronic data may be subject to revision due to quality assurance standards and non-calibration of equipment recorded or verified. Although compares very well with similar rainfall gauges of stations reviewed that are maintained by USGS within approximate County vicinity.

Sabinal River Flood Early Warning System



- Gage sights have been identified and installation of the gage is in the process of being scheduled.
- The project is scheduled for completion in August 2022.

2020 2nd Quarter Highlights



- On March 11, 2020, District employees Levi Sparks and Clint Carter met with the Hill Country Alliance, Texas Parks & Wildlife Department, and employees of the City of Bandera to discuss and plan a future erosion control project for the City Park. This will improve both the aesthetic value and the environmental value of the City Park and in turn, will improve the overall health of the Medina River.

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